



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



DEC 30 2013

John Richardson  
Community Renewable Energy Services, Inc. dba Dinuba Energy  
6929 Avenue 430  
Reedley, CA 93564

**RE: Final – Authority to Construct/Certificate of Conformity (Minor Mod)**  
**Facility Number: S-285**  
**Project Number: S-1131583**

Dear Mr. Richardson:

The Air Pollution Control Officer has issued the Authority to Construct permit to Community Renewable Energy Services, Inc. dba Dinuba Energy for authorization to burn waste paper, at 6929 Avenue 430 in Reedley.

Enclosed are the Authority to Construct permit, invoice, and engineering evaluation with attachments. The District's analysis of the proposal was sent to US EPA Region IX on November 14, 2013. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

DW:ktr

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Sayed Sadredin  
Executive Director/Air Pollution Control Officer

Northern Region  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-285-2-11

**ISSUANCE DATE:** 12/20/2013

**LEGAL OWNER OR OPERATOR:** CRES INC DBA DINUBA ENERGY

**MAILING ADDRESS:** 6929 AVENUE 430  
REEDLEY, CA 93654

**LOCATION:** 6929 AVENUE 430  
REEDLEY, CA 93654

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 11.5 MW WOOD-FUELED COGENERATION FACILITY INCLUDING TRAVELING GRATE BOILER WITH FLUE GAS RECIRCULATION (FGR), AMMONIA INJECTION, STEAM TURBINE/GENERATOR, NATURAL GAS FIRED AUXILIARY BURNER, MULTICLONE DUST COLLECTOR, SINGLE CHAMBER TWO CELL ELECTROSTATIC PRECIPITATOR, AND PM WET SCRUBBER: AUTHORIZE COMBUSTION OF COMPACTED PAPER FUEL

## CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper OK), roof overhang, or any other obstruction. [District Rule 4102]
4. Ammonia injection system shall be operated and maintained in accordance with manufacturers specification. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Multiclone dust collector, electrostatic precipitator, and PM wet scrubber shall be operated and maintained in accordance with manufacturer's specifications whenever combustion is present in the boiler. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Electrostatic precipitator shall be equipped with an automatic rapping system. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Sayed Sadredin, Executive Director / APCO



DAVID WARNER, Director of Permit Services

S-285-2-11 : Dec 20 2013 12:27PM - RICKARDK : Joint Inspection NOT Required

7. Scrubber liquid pH shall be maintained between 3.0 and 8.0 and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Scrubber, including sprays and nozzles, shall be maintained in optimum working condition. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Combustion system shall be equipped with continuous emissions monitors (CEM) for NO<sub>x</sub>, CO, CO<sub>2</sub>, O<sub>2</sub>, volumetric flowrate, and opacity. [District Rule 2201 and 40 CFR part 64] Federally Enforceable Through Title V Permit
11. Continuous emissions monitors shall be operated in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specifications 1, 2, 3, 4, and CFR Part 60, Appendix F. [District Rules 1080, 4352, and 40 CFR part 64] Federally Enforceable Through Title V Permit
12. Continuous emissions monitor for flue gas volume flow-rate shall meet EPA monitoring performance specifications appearing in 40 CFR, Part 52, Appendix E. [District Rules 4001, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
13. Ammonia shall be injected into boiler at a rate that results in compliance with the NO<sub>x</sub> emissions limit. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Nitrogen oxide emissions (as NO<sub>2</sub>) shall not exceed 90 ppmv @ 3% O<sub>2</sub> nor 0.09 lbs/MMBtu based on a 24 hour average, except during periods of startup and shutdown as defined in Rule 4352. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
15. Nitrogen oxide emissions (as NO<sub>2</sub>) shall not exceed 17.87 lb/hr (based on a 24-hr period between 12:00 am midnight to the following midnight) and 70.44 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Carbon monoxide (CO) emissions shall not exceed 400 ppmv @ 3% O<sub>2</sub>, except during periods of startup and shutdown, as defined in Rule 4352. [District Rule 4352] Federally Enforceable Through Title V Permit
17. Carbon monoxide (CO) emissions shall not exceed 99.3 lbs/hr (based on a 24-hr period between 12:00 am midnight to the following midnight) and 249 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
18. PM<sub>10</sub> emissions shall not exceed 0.0144 grains/dscf corrected to 12% CO<sub>2</sub>, 5.76 lbs/hr and 22.71 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Volatile organic compound emissions shall not exceed 13.30 lbs/hr and 52.4 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Sulfur oxide emissions (as SO<sub>2</sub>) shall not exceed 9.90 lbs/hr and 39.1 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Carbon monoxide (CO) emissions shall not exceed 249 tons for any consecutive 365 day period. Cumulative emissions from the previous 365 day consecutive period shall be summed daily and reported to the District quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Combustion system shall not operate for more than 7,884 hours per year unless Dinuba Energy demonstrates compliance with the yearly emissions limits listed above. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Only natural gas, soiled biomass, and wood fuels shall be burned in the boiler. Contamination of the fuel, as delivered to the boiler, shall not exceed 1.0% by weight total and limited to the following materials: metals, plastics, painted wood, particle board, wood treated with preservatives, and roofing materials. None of the contaminants allowed by this condition shall contain asbestos. [District Rule 2201 and 4102] Federally Enforceable Through Title V Permit
24. Facility shall not burn in the combustion system more than 240 lbs/hr nor 1051.2 tons/yr of non-wood and non-soiled biomass material. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

25. "Wood" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removals, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Wood does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District Rule 2201 and 4102] Federally Enforceable Through Title V Permit
26. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District Rule 2201 and 4102] Federally Enforceable Through Title V Permit
27. "Soiled Biomass" shall be defined as shredded and compacted paper with attached tag listing percent content by weight of plastic of each delivered container. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Compliance with fuel contamination limits shall be demonstrated by sorting a District selected 5 ton representative sample of fuel as requested by the District compliance division. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Data collected during sorting of 5 ton sample of fuel shall be in pounds of material per ton of fuel, by category as identified in fuel contamination limit condition, and official test results and field data shall be submitted within 30 days after collection. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Source testing for NOx and CO emissions while combusting fuels other than or in combination with wood fuel shall be conducted by an independent testing laboratory within 60 days of initial startup. [District Rules 2201 and 4352] Federally Enforceable Through Title V Permit
31. NOx, CO, and PM emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 4352, 1081, and 40 CFR part 64] Federally Enforceable Through Title V Permit
32. Source testing for the following parameters shall be conducted using the stated test methods: NOx - EPA Method 7 or ARB Method 100, CO - EPA Method 10 or ARB Method 100, CO2 - EPA Method 3 or ARB Method 100, O2 - EPA Method 3 or ARB Method 100, SO2 - EPA Method 6 or ARB Method 100, PM10 - EPA Methods 201A & 202, Stack Gas Flow Rate - EPA Method 2, Moisture Content - EPA Method 4, Ammonia - BAAQMD ST1B, & Fuel Heating Value - ASTM Method D2015 or E711. [District Rule 2201 and 4352] Federally Enforceable Through Title V Permit
33. Official test results and field data from compliance testing shall be submitted within 60 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
34. Dinuba Energy shall adjust rates of total air flow, overfire air flow, and ammonia injection to simultaneously meet all emissions limits, including visible emissions limit, and keep ammonia slip to a minimum. [District Rule 4102]
35. The auxiliary burner shall be fired exclusively with natural gas. A daily record of fuel gas consumption shall be maintained and submitted to the District quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Equipment breakdowns of the combustion or CEM systems shall be reported in accordance with District rules 1080 and 1100. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
37. Particulate matter concentration (including both filterable and condensable particulates) exiting the PM wet scrubber shall not exceed 0.016 grains/dscf corrected to 12% CO2. [District Rule 2201] Federally Enforceable Through Title V Permit
38. Rapping frequency and duration shall be pre-programmed and identical for each location, and only one rapping location shall be energized at any one time. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Electrostatic precipitator shall be equipped with an opacity continuous emissions monitor (CEM), which shall be operated in accordance with the requirements of 40 CFR, Part 51, Appendix P, and Part 60, Appendix B. [District Rule 1080 and 40 CFR 63.11205(a)] Federally Enforceable Through Title V Permit
40. Opacity readings shall be averaged over a 15 minute period. [District Rule 2201] Federally Enforceable Through Title V Permit
41. Daily opacity reading of 20% or greater shall be reported to the District quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. Dinuba Energy shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of opacity CEM. [District Rule 2201] Federally Enforceable Through Title V Permit
43. Dinuba Energy shall maintain records of the results of performance testing, evaluations, calibrations, checks, adjustments and maintenance of CEMs. [District Rule 2201, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
44. Annual audits of continuous emissions monitors shall be conducted pursuant to the requirements of Rule 1080 and in accordance with EPA guidelines, by an independent testing laboratory. The audits shall be District witnessed and the results submitted to the District within 30 days of completion of the audit. [District Rule 1080 and 40 CFR part 64] Federally Enforceable Through Title V Permit
45. All quarterly reports shall be submitted to the District within 30 days of the end of each calendar quarter. Exceedance of any permit emissions limitation, including opacity, shall be noted on the quarterly report. [District Rule 1080 and 40 CFR part 64] Federally Enforceable Through Title V Permit
46. All records shall be retained on site for a period of at least 5 years and made readily available to the District upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
47. The permittee shall sample wood fuel for metals and asbestos analysis quarterly and whenever directed by the District inspector. [District Rule 4102]
48. Fuel contamination shall be confirmed by sorting and weighing one 55 gallon container of randomly selected soiled biomass quarterly and whenever there is a change in the source of the fuel to demonstrate compliance with percent by weight contaminant limit. Records of the date of testing, weight of paper and of contaminant, and resulting percentage by weight of contaminant shall be maintained. [District Rule 4102]
49. The permittee shall submit a written sampling plan to the District's Compliance Division at least 20 calendar days prior to sampling for metals analysis or asbestos. This plan shall include the date, name of lab, lab's certification # for conducting tests, copy of chain of custody form to be utilized for tracking samples, and method of sampling. [District Rule 4102]
50. Permittee shall submit a written sampling plan to the District's Compliance Division at least 20 calendar days prior to sampling blended fuel for percent by weight contaminant content. This plan shall include the date and method of sampling. [District Rule 4102]
51. The plastics, metals, and asbestos samples shall be collected in accordance with a written plan for representative samples approved by the District. [District Rule 2201 and 4102] Federally Enforceable Through Title V Permit
52. The permittee shall have the samples analyzed for metals by ASTM Method E885, or equivalent method approved by the District, using an independent testing laboratory certified to conduct the analysis. The metals to be quantified include Arsenic, Copper, Lead, Manganese, Nickel, Zinc, and Total Chromium. [District Rule 4102]
53. The results of the metals and asbestos analysis shall be reported in ppm (by weight). [District Rule 1081] Federally Enforceable Through Title V Permit
54. The results of metal and asbestos sampling analysis and evidence of chain of custody and results of plastic sampling analysis shall be submitted to the District Compliance Division within 30 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
55. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO<sub>x</sub> and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
56. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
57. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59 \times P^{0.62}$ ; P is less than or equal to 30 tons per hour, or  $E=17.31 \times P^{0.16}$ ; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

58. Particulate matter emissions shall not exceed 0.10 lb/MMBtu. [40 CFR 60.43b(c)(1)] Federally Enforceable Through Title V Permit
59. Owner or operator shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)] Federally Enforceable Through Title V Permit
60. The particulate matter, and opacity standards shall apply at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g), 60.46b(a)] Federally Enforceable Through Title V Permit
61. The facility's annual capacity factor for natural gas shall be less than or equal to 10 percent (0.10). [40 CFR 60.44b(d)] Federally Enforceable Through Title V Permit
62. The owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system, [40 CFR 60.48b(a)] Federally Enforceable Through Title V Permit
63. The continuous monitoring systems shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)] Federally Enforceable Through Title V Permit
64. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent. [40 CFR 60.48b(e)] Federally Enforceable Through Title V Permit
65. The permittee shall record and maintain records of the amount of wood, natural gas, and soiled biomass combusted each day, and calculate the annual capacity factor individually for wood and natural gas on a 12-month rolling average with a capacity factor calculated at the end of each month. [40 CFR 60.49b (d)] Federally Enforceable Through Title V Permit
66. Operator shall calculate and keep daily records of percent by weight of plastic in boiler fuel stream on days that soiled biomass is combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
67. Operator shall keep daily records of the source, individual weight, and percentage plastic by weight of each container of soiled biomass combusted. [District Rule 2201] Federally Enforceable Through Title V Permit
68. The owner or operator shall submit excess emission reports of all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f) during the reporting period. [40 CFR 60.49b(h)] Federally Enforceable Through Title V Permit
69. At the time of each annual source test for PM, the permittee shall establish the acceptable range of primary and secondary current and voltage readings for the electrostatic precipitator. Minimum readings for each parameter shall be established at 15% below the average value measured during the PM source test. Maximum readings for each parameter shall be established at 15% above the average value measured during the PM source test. [40 CFR part 64] Federally Enforceable Through Title V Permit
70. During each day of operation, the permittee shall record electrostatic precipitator voltage and current readings and compare the readings with the acceptable range of current and voltage levels established during the most recent annual PM source test. Upon detecting any excursion from the acceptable range of current or voltage readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit
71. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR part 64] Federally Enforceable Through Title V Permit
72. Scrubber Quench Temperature shall monitored on the Scrubber Control Panel in the control room. Any excursion of scrubber quench temperature above 160 °F shall be recorded and immediate manual implementation of the scrubber deluge system shall be performed at 160°F and an automatic shutdown of the induced draft fan/boiler shall be triggered at 161°F. [District Rule 40 CFR part 64] Federally Enforceable Through Title V Permit
73. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

74. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
75. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
76. The permittee shall conduct a performance tune-up of the boiler in accordance with 40 CFR 63.11223(b), and every two years thereafter. Permittee shall submit a signed statement of the Notification of Compliance Status report that a tune-up of the boiler was completed. [40 CFR 63.11214(b)] Federally Enforceable Through Title V Permit
77. By March 21, 2014, the permittee shall conduct a one-time energy assessment as described in 40 CFR 63, Subpart JJJJJJ, Table 2. Permittee shall submit a signed statement in the Notification of Compliance Status report that the energy assessment was completed, and shall submit the energy assessment report upon request. [40 CFR 63.11214(c)] Federally Enforceable Through Title V Permit